

## IN THE CLAIMS

Please cancel claims 1-28, 33, 35-37, 43, 45, 46, and 55-63 without prejudice.

Please amend claims 29-32, 34, and 38-40 as follows:

Claims 1-28: Canceled

29. (Currently Amended) A computer-readable storage medium having stored and encoded thereon computer-executable instructions for performing on a computing device an enhanced local search of web sites and intranets by mining user access logs, comprising:

- segmenting the user access log into different browsing sessions;
- generating ordered pairs of pages from the browsing sessions to find implicit links by using a gliding window to move over explicit paths of the browsing sessions to generate the ordered pairs of pages;
- determining a frequency of each of the ordered pairs;
- defining a minimum support threshold;
- applying the minimum support threshold to the frequency of each of the ordered pairs;
- filtering the ordered pairs to remove any ordered pairs that are infrequently occurring;
- constructing an implicit links graph from the implicit links;
- generating two-item sequential patterns from the ordered pairs;
- updating the implicit links graph using the two-item sequential patterns;
- re-ranking search results obtained from a search engine to enhance the local searching to produce updated search results; and
- displaying the updated search results to a user.

30. (Currently Amended) The computer-readable storage medium of claim 29, further comprising pre-processing the user access log using at least one of: (a) data cleaning; (b) browsing session identification; (c) consecutive repetition elimination.

31. (Currently Amended) The computer-readable storage medium of claim 29, further comprising identifying each individual ones of the browsing sessions.

32. (Currently Amended) The computer-readable storage medium of claim 31, further comprising identifying in terms of a user identification and a chronological order of pages.

33. (Canceled)

34. (Currently Amended) The computer-readable storage medium of claim 29, further comprising defining the gliding window size, wherein the size represents a maximum interval a user clicks between a source page and a target page.

35. (Canceled)

36. (Canceled)

37. (Canceled)

38. (Currently Amended) The computer-readable storage medium of claim 29, further comprising discarding an ordered pair if its frequency is below the minimum support threshold.

39. (Currently Amended) The computer-readable storage medium of claim 29, further comprising keeping an ordered pair if its frequency is above the minimum support threshold.

40. (Currently Amended) A computer-implemented method contained on computer-readable storage media having stored and encoded thereon computer-executable instructions for execution on a general-purpose computing device for

enhancing initial search results of a search engine performing a local search of a web sub-space using a user access log, comprising:

**using the general-purpose computing device to perform the following process actions:**

pre-processing the user access log;  
segmenting the log into browsing sessions;  
generating ordered pairs of implicit links from the browsing sessions;  
filtering the ordered pairs using a minimum support threshold to remove any infrequently occurring ordered pairs to generate two-item sequential patterns;  
updating an implicit links graph using the two-item sequential patterns;  
defining an adjacency matrix to describe the updated implicit links graph;  
defining a modified re-ranking formula in terms of the adjacency matrix;  
modifying the re-ranking formula using a random walk technique;  
re-ranking the initial search results using the updated implicit links graph to generate enhanced search results; and  
displaying the enhanced search results to a user.

41. (Original) The computer-implemented method as set forth in claim 40, further comprising discarding any ordered pairs having a frequency below the minimum support threshold.

42. (Original) The computer-implemented method as set forth in claim 40, further comprising keeping any ordered pairs having a frequency above the minimum support threshold.

43. (Canceled)

44. (Previously Presented) The computer-implemented method as set forth in claim 40, further comprising computing a page rank using the adjacency matrix.

45. (Canceled)

46. (Canceled)

47. (Original) The computer-implemented method as set forth in claim 40, further comprising discarding any ordered pairs having a frequency below the minimum support threshold.

48. (Original) The computer-implemented method as set forth in claim 47, wherein the random walk technique further comprises a probability parameter.

49. (Original) The computer-implemented method as set forth in claim 40, wherein re-ranking further comprises using an order-based re-ranking technique.

50. (Original) The computer-implemented method as set forth in claim 49, wherein the order-based re-ranking technique further comprises using a linear combination of page positions contained on two lists.

51. (Original) The computer-implemented method as set forth in claim 50, wherein one of the two lists is sorted by similarity scores.

52. (Original) The computer-implemented method as set forth in claim 50, wherein one of the lists is sorted by PageRank values.

53. (Original) The computer-implemented method as set forth in claim 40, wherein re-ranking further comprises using an score-based re-ranking technique.

54. (Original) The computer-implemented method as set forth in claim 53, wherein the score-based re-ranking technique further comprises using a linear combination of a content-based similarity score and a PageRank value of all pages.

Claims 55-63: Canceled